

METHOD AND CIRCUIT FOR FOLDED ANALOG-TO-DIGITAL CONVERTER
(ADC) USING FREQUENCY DETECTORS AND TIME DETECTORS

ABSTRACT

A voltage of an input analog signal (105 or 405) can be converted to a signal whose frequency is dependent upon the analog input signal (135 or 435). A frequency divider (115 or 415) can be configured to convert the frequency dependent signal to a frequency divided signal (140 or 440). A first frequency detector (420a) or time detector (120a) can be configured to determine the frequency of the frequency divided signal, thereby creating a first output signal (145a or 445a). A second frequency detector (420b) or time detector (120b) can be configured to determine the frequency of the frequency dependent or non-frequency divided signal, thereby creating a second output signal (145b or 445b). The first and second output signals can be post-processed to generate a digital output signal (130 or 430) that is representative of the input analog signal.